

NATURAL RESOURCES CONSERVATION SERVICE

NEVADA CONSERVATION PRACTICE STANDARD

IRRIGATION LAND LEVELING

(Ft.)

CODE 464

PRACTICE SUPPLEMENT

Design Criteria

Bench marks. The elevation of bench marks shall be established to at least 0.05 feet for leveling plans with irrigation slopes greater than 0.2 ft/100 ft. and to 0.01 ft for leveling plans with slopes of 0.2 ft/100 ft. or less.

Field readings and grades. The elevation (or grade rod) at field stake locations shall be determined to at least the nearest 0.1 foot, and design grades determined to the nearest 0.1 ft./100 ft. for leveling plans with irrigation slopes greater than 0.2 ft./100 ft. For leveling plans with irrigation slopes of 0.2 ft./100 ft. or less, the elevation (or grade rod) at field stake locations shall be determined to the nearest 0.05 ft. and design grades determined to at least the nearest 0.05 ft./100 ft.

Field stake reference. Reference marks should be established on stakes where readings are taken to the nearest 0.05 ft. (and on all stakes where it may be difficult to determine the original location of the rod) to facilitate accurate marking of stakes, except where leveling is to be done by laser controlled equipment.

PLANNING CONSIDERATIONS

Water Quantity

This practice provides the potential to improve water distribution uniformity and reduction of deep percolation and surface runoff. Irrigation in excess of soil water storage may be controlled through management of the application. Transpiration may increase because of the greater uniformity of water application and increase plant use. Water logging may occur if proper management practices are not followed. Improved application may affect downstream water supply.

Water Quality

The effects of this practice depend on the level of irrigation water management. If root zone water is properly managed, then quality decreases of surface and ground water may be avoided. Under poor management, ground and surface water quality may deteriorate. Deep percolation and recharge with poor quality water may lower aquifer quality. Land leveling may minimize erosion and when runoff occurs concurrent sediment yield reduction. Poor management may cause an increase in salinity of soil, ground or surface waters.